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CACTUS AND SUCCULENT JOURNAL

Of the Cactus And Succulent Society Of America

Vol. XIV FEBRUARY, 1942 No. 2

WHO'S WHO

FIG. 13. Vera Higgins, Hon. Editor, Cactus and Succulent Society of Great Britain.

CACTUS AND SUCCULENT JOURNAL

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PRESIDENT'S MESSAGE

At a meeting of the Executive Committee held January 16, 1942, at Los Angeles, California, Mr. Wm. Taylor Marshall was unanimously elected to the office of President Emeritus. In making the appointment, the Board pointed out that contrary to a frequent interpretation that this office is filled by one whose valued work is considered finished, such is not here the case; that the present incumbent is being left free to work where and as he sees the need. And I can assure you that "Bill" Marshall will be working as hard as ever for the advancement of the Society and its ideals.

Regional Vice-President appointments have now been made. These people are selected from geographically designated districts for their ability to help you, whether it is to answer your questions on growing cacti, to help you form a local Club that can become Affiliated with the National Society, or for any other information you may desire in connection with our mutually interesting hobby. The one in your district is closer to your locality than the National Headquarters and can, therefore, frequently give you more concise information adaptable to your local conditions. For your convenience, the new appointments of Regional Vice-Presidents, their addresses, and the territory over which they have jurisdiction are here listed.

Mr. Homer Rush, 820 W. 115th St., Los Angeles, Calif., Arizona, Utah, Nevada, and California; Mrs. Harry Lewis, 2034 E. 110th St., Seattle, Wash., Montana, Idaho, Oregon, and Washington; Mr. Pat White, F.C.S.S., 526 N. 62nd St., Wauwatosa, Wis., that part of Illinois lying west of Lake Michigan, Iowa, Minnesota, Michigan, and Wisconsin; Mr. Chas. Cole, F.C.S.S., 1797 Wm. H. Taft Road, Cincinnati, Ohio, West Virginia, Virginia, North Carolina, Tennessee, Indiana, Kentucky, and Ohio; Mrs. S. P. Seela, F.C.S.S., 916 N. W. 6th St., Oklahoma City, Okla., North Dakota, South Dakota, Nebraska, Kansas, and Oklahoma; Mr. Ladislaus Cutak, F.C.S.S., in charge of succulents Missouri Botanical Gardens, St. Louis, Mo., that part of Illinois lying south of the lower tip of Lake Michigan, Iowa, Arkansas, and Missouri; Mr. Jack Barker, 626 S. Washington St., Denver, Colo., Wyoming, New Mexico, and Colorado; Mr. Robt. Runyon, 812 St. Charles St., Brownsville, Tex., the state of Texas; Mr. Art Garrabrant, 39 Garrabrant Ave., Bloomfield, N. J., Maine, Vermont, New Hampshire, Massachusetts, Connecticut, New York, Pennsylvania, Delaware, Rhode Island, Maryland, and New Jersey; Mr. W. P. Reedy, 822 Pearl River, McComb, Miss., South Carolina, Florida, Georgia, Alabama, and Mississippi.

Mr. Thor Methven Bock, the artist whose very fine drawings illustrate the keys in the new book "Cactaceae," has been appointed Corresponding Secretary for the ensuing year. Mr. Bock is in close contact with the Editorial Office of the JOURNAL, please note. His address is 8148 Mannix Dr., Hollywood, Calif.

And here's news that you have all been waiting for. Your Board of Directors has accepted the invitation of the K.I.O. Cactus Club to hold the next Convention at Cincinnati. The chairman of the Convention Committee, who else but that energetic Fellow of the Cactus & Succulent Society, is Chas. Cole. The date has been tentatively set for 1943, dependent on world conditions. Not being able to have a definite date set is going to make Mr. Cole's work much harder and we will all have to give him our whole-hearted co-operation. The first thing that you can do is to write to Mr. Cole or myself suggesting what you want and don't want at the Convention. It is important that you do this soon for plans are already being formulated.

In these times of strife and turmoil, how fortunate are we who have a collection of plants. In our gardens is perhaps the only place in the world today where we can find peace and harmony.

ERVIN STRONG, 315½ W. Erna St., La Habra, Calif.

AMATEUR SERIES

Here are the first instructions for all those who have expressed their willingness to help in experimenting and recording a series of Amateur Articles. Other members are welcome to take an active part in this work. Promptness is a requisite for this department to be a success. Please send in your material and photos by March 15.

Our first project is to compile articles for a supplementary issue of the JOURNAL on two subjects:

1. Mistakes I have made and how I would avoid them in starting another collection.
2. Housing cacti and succulents.

The first is self-explanatory. The second subject is a very interesting one since it includes so many methods of caring for plants—window collections, sun room collections, plants plunged in summer and stored in attics during the winter, glasshouses warmed by cellar heat, lath and clothhouse collections, combination of outdoor and indoor plants, glasshouses with varied heating and ventilating methods, automatic glasshouses, etc. It is most important that all sections of the country are covered so that the information will apply for whoever may be seeking guidance.

After this preliminary work we will have a competition in growing and propagating common plants. This will bring out the advantages of proper housing facilities.

SCOTT E. HASELTON, *Editor.*

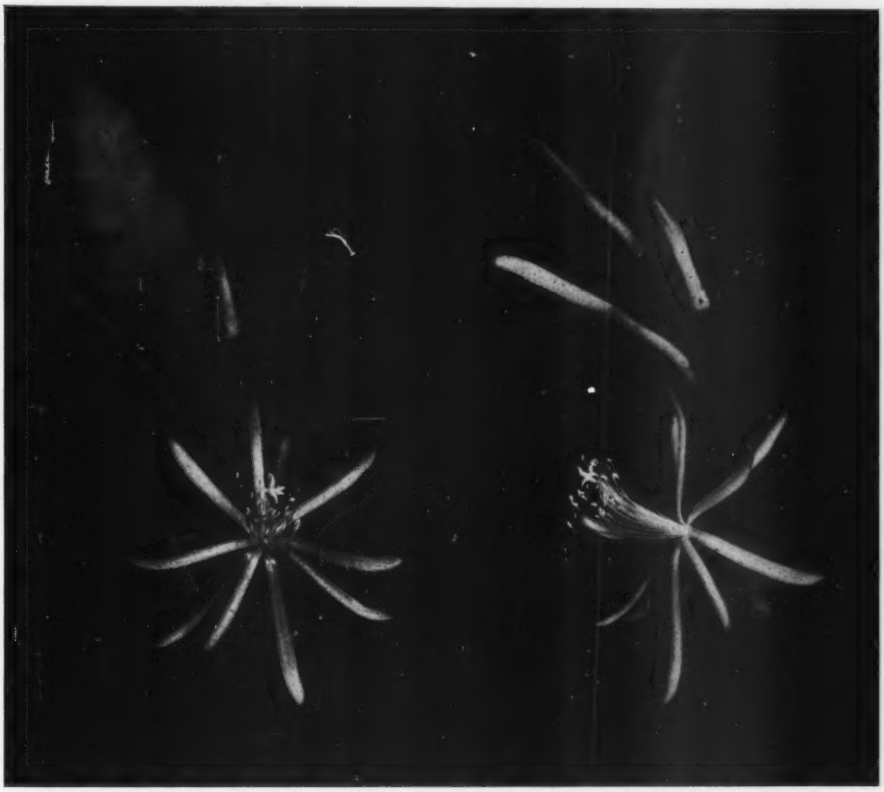


FIG. 14. *Pseudorhipsalis macrantha* sp. nov. LEFT: Front view of flower. RIGHT: Side view of branch, bud, and flower. Approx. 5/8 size.

A New and Unique Pseudorhipsalis

By E. J. ALEXANDER

The tribe *Rhipsalidanae* has always been accepted as containing only plants having small inconspicuous flowers. Some of the species, it is true, are showy because of the quantity of flowers they produce at one time, but individual flowers are always less than an inch across. It is now the writer's rather doubtful pleasure to upset this long-established fact.

Among many plants of *Epiphyllum* and a few epiphyllum-like ones grown from cuttings brought back by Mr. T. MacDougall from southern Mexico, one species which has flowered two seasons in the greenhouses at the New York Botanical Garden has proved most astonishing. Several plants flowered heavily, some branches bearing from 9 to 12 flowers each, and all typically rhipsalis-like, but with a tube 1 to 1¼ inches long and a petal spread of 3 inches. They threw off a sweet, musky perfume that scented the entire house in which they flowered. Such a flower is so absolutely in defiance of all limits within the tribe that it was at first thought to represent a new genus in the *Epiphyllanae*, but careful study of the floral structure removed all doubt as to its Rhipsalidoid character. The plant is a new species in the little-known genus *Pseudorhipsalis*, the structure being very similar to that of *Pseudorhipsalis himantoclada* except for size—the flower of *P. himantoclada* being ¾ to 1 inch across, with a flower-tube ½ inch long. This new species is further set off from *Epiphyllum* by a striking coloration, which, while common in the *Rhipsalidanae*, exists in no known wild species of *Epiphyllum*, with which this

plant must be compared horticulturally. The outer perianth lobes are brown-orange, all of the inner ones lemon yellow. This species is a late autumn and winter bloomer, flowering for nearly three months, from late October until well into January. The flowers open in the early evening and remain fresh until the following afternoon when wilting begins, but are not completely withered until the second afternoon.

This unusual novelty is here presented to the cactus world:

Pseudorhipsalis macrantha Alexander, sp. nov.

Planta epiphytica, caulibus et ramosis phylloideis, basi teretibus, dentibus 2-3 cm. separatis; flore 6.5-7 cm. in diametro, tubo perianthae 2.5 cm. longo, lobis 9-13, linearibus, patentibus, 3.5 cm. longis, 5 mm. latis, lobis exterioribus fusco-aurantiacis, lobis interioribus luteis; staminibus numerosis, stigmatibus 5, papillosis. Fructus ruber, globosus, 7-8 mm. in diametro.

Plant epiphytic, the stems and branches phylloid, bright green, terete at the base, arching or pendent, up to 90 cm. long and 4.5 cm. wide, tapering apically, the crenulations 2-3 cm. apart. *Areoles minutely gray-felted. Flowers* 3 cm. across, solitary from the areoles; ovary 4-5 mm. long, green with 6 deltoid brownish-purple scales 1-1.5 mm. long; tube 2.5 cm. long, flushed rosy-purple over a greenish-orange ground, naked or with 1-2 rosy-purple deltoid scales 1-2 mm. long; perianth lobes reflexed-spreading, 9-13, linear, 35 mm. long, 5 mm. broad, cucullate at the apex, the three outer light brown-orange, rosy-purple at the base, the remaining ones bright lemon-yellow. Stamens numerous, somewhat decurved, the filaments white, 20-30 mm. long, anthers and pollen cream-color. Style and stigma cream-color, slightly exceeding the stamens, stigmas 5, spreading, lance-linear, strongly papillose. Fruit red, globular, 7-8 mm. in diameter. The plants failed to produce fruit upon pollination with one another. The fruits obtained were produced by using the pollen of *Zygocactus*.

Type collected north of Niltepec, on the north side of the main Sierra near La Gloria at 2500 ft. alt. in rain forest, State of Oaxaca, Mexico, in the winter of 1939-40 and flowered at the New York Botanical Garden in 1940 and 1941. Specimen deposited in the New York Botanical Garden Herbarium.

New York Botanical Garden
Jan., 1942.

"TEXAS CACTI" AVAILABLE

We have been fortunate in securing ALL of the remaining copies of this valuable reference book which has been impossible to obtain for the last three years. After this supply is exhausted no more copies will be sold except as a rare book item. This book is so valuable that we have bound copies only, available at $3.00 postpaid. Box 101, Pasadena, Calif.

IN DEFENSE OF THE ATTACKED

By HERMAN F. BECKER, *Biologist, Brooklyn College*

With the greatest interest have I followed the Woods-Croizat controversy, which appeared in Nov., '41, and Dec., '42, under the heading "On Methods and Experiments." Since these contradictions are bound to cast doubts on methods of application, confuse our readers or even impede the success in cultivation of succulents, I cannot resist to take up the cudgels, not for the small flower pot, but for the proper one.

Nature, the greatest teacher, presents us with the most revealing analogies everywhere. If only, for a moment, we would stop to arrest our traditional beliefs, prejudices and hasty conclusions. Let us investigate what nature offers for the taking on a silver platter.

Take, for instance, the case of another plant group, the orchids. The vegetative growth of these plants may easily be retarded by withholding proper potting material, water and shade. As a result, these starved plants, in a last effort to sustain their species, will burst forth in a profusion of bloom, after which the grower restores normal growing conditions for the revival of the fooled plant. This treatment, however, does not represent the normal procedure for orchid culture and I do not propose it for application to succulents, for it might result in disastrous consequences. Nevertheless, this principle with reasonable modifications holds true for most plants, including xerophytes.

I have studied cactus literature of years gone by and compared it with publications of most recent origin. Mr. Wm. Watson, Curator of the Royal Gardens in Kew, writes in 1920, " . . . pots most suitable, are to be small . . . When wild, their roots (cactus) are often crowded in a small space between boulders; with their roots cramped, growth is firmer and the flowers are produced in much greater profusion, than when liberal root space is afforded." I do not intend to list all views on this point up through the ages, because these views show a remarkable resemblance. In spite of this, I do not insist, that these opinions are absolutely right beyond a doubt. But they may well be taken as an indicator of common experience. We must be truthful and tolerant enough, not to insist on our own point as the inalterable truth, if experiments of parallel investigation prove otherwise.

For certain purposes in plant research, growth alone may be desirable; but the general collector of average interest in his hobby, grows, in order to bring into bloom. Our reveries, of which we reveal only an infinitesimal part to our fellow men, include daily visions of flourishing specimen, blooming with the radiance of all hues of the rainbow. Who is there to deny this? The scientist, in clarifying nomenclature and determining species, has to approach this subject from a different angle. Flowers naturally play a great part in his investigations, but he can, if necessary, do without them, confining himself to formations of stems, leaves, spines, hairs, glands, or latex. Thus, without the necessity of flowers he is satisfied to see growth well established and advanced.

Just as "big fleas bite little fleas and little fleas bite lesser fleas" so do big plants come from smaller plants and small plants from seeds. There has to be a natural transition and normal, gradual sequence in size of plants as well as of pots. Nature teaches us evolution over a period of millions of years as well as a recapitulation of this evolution in every individual. We start out with an embryo seed, as we would with a baby, to take the same example. However, we do not feed it potatoes and steak to make it grow fast, but keep it on a careful milk diet, (the small pot with sand or very

sandy soil, equivalent to very little food). Large pots are to be given gradually.

Let us begin with a cutting of cactus or Euphorbia. Bare of roots, with a cut surface susceptible to fungus or bacterial diseases, we insert this cutting in a medium of sand. Sand contains few, if any, injurious diseases and contains little, if any, food or nourishing value. We use sand for both these reasons. The cutting, permanently without roots, would eventually die of lack of the necessary ingredients, which sustain life. In giving this cutting a personality for the moment, we may say, that it has the desire to survive and as a last resort sends forth roots, emerging as parts of the already present tissue. These roots find nothing in the sand but moisture. In their quest of urgently needed food they grow rapidly until better feeding grounds are reached. At this point the cutting begins to grow, if potted in a suitable container or planted out in a bed. If, from necessity, we have to carry on in pots instead of in a bed or bench, we must take several factors into consideration; these are drainage, pots, soil medium, temperature and moisture.

After lengthy discussions on this subject in the JOURNAL throughout the years, I take it for granted that everyone is familiar with drainage and has found the various proper mixtures of soil, suitable to certain groups of succulents. The size of pots seems the debatable question here. The reasoning is very simple and has the support from practical experience of almost all nurseries and private collectors as well. Once rooted, the cutting must be potted in a small container, just big enough to hold the newly formed roots conveniently. We may favor the plant with all conditions such as earth, drainage, temperature and moisture, but we cannot control the most important factor, namely, airation of the root system, unless we do some rational thinking. Aeration, just as drainage is of greatest importance. Nobody would omit proper drainage, the concept and practice of which spells the first letter in the Cactus ABC. And yet, crimes are committed as far as aeration is concerned. A large pot with excellent drainage may have, and has in most cases, very poor air circulation. The great amount of soil will settle tightly, excluding proper aeration vertically. The distance from stem to edge of tub is too great to permit proper circulation horizontally. Therefore a small pot with 100% aeration is necessary. This implies by no means, that the plant should always stay, or be grown in a small container. We have to watch the growth of the plant and check the root system periodically. *Whenever it is pot-bound or almost so, it is time to transplant again in a large pot, well proportioned to its size, and with rapidity of growth taken into consideration.* Thus, the increase in size of pots keeps pace in proportion to the progressive growth of the plant. This fundamental rule, supported by years of practical experience, holds true for greenhouse as well as for open air culture.

For the aforementioned reasons, commercial nurseries and Botanic Gardens, of which I know many in Europe as well as in the eastern United States, grow cacti and succulents in small pots without exception, necessitating more frequent transplanting and watering. From the aesthetic point of view it is also not desirable or advisable to have cacti in large pots *or tubs. In the first place, our space is usually limited* and we are reluctant to sacrifice an extensive collection for the sake of space. There is nothing more depressing and ugly than a greenhouse with a large number of huge pots, containing plants which seem lost in the maze of rings of red clay.

It does not fall in the scope of this discussion to expand on the benefit of indoor versus open air culture. In addition, however, it should be stated, that a pot in proportion to the plant always permits ready inspection of the root system, eliminating the possibility of ants, mealy bugs or roaches. Try though, to examine the soil or roots of a plant in a very large pot or tub and you will find that this is close to impossible for the soil will inevitably fall apart during the process of removing the container.

It is quite true that several seedlings together will grow better in a large container than individually in small pots. But it must again be emphasized that these containers should be shallow pans, flats of clay or wood, or shallow benches. Large pots have always a corresponding depth, mostly that of the diameter of the rim. Despite good drainage, two-thirds of the soil above the drainage will become hard and eventually impervious to air; it is because of these conditions, that the roots will rarely reach this part of the pot. If they do, they will decay and seriously endanger the life of the plant. Experiments prove that all roots grow according to the law of certain tropisms, such as Hydro- and Aero-tropism. Since roots need oxygen for their growth, they are, one might say, attracted to the air via the shortest distance, which is that from the axis of the plant to the edge of the pot. In a large pot therefore, roots do not tend to grow downwards, but develop mainly laterally, staying near the surface and thus causing the plant to be wobbly and unstable. In a small pot, where water and air are evenly available, roots will grow downwards at the same rate as sideways.

Let us hope, that this rather expansive contribution to such a little thing as a large flower pot might help to clear up certain misconceptions on this subject.

FROM THE "BOSTON POST"

CHRISTMAS CACTUS—*I have two Christmas cactus plants. Each cactus is in a 10-inch pot, full to the brim with sand, and neither one of them has blossomed for the last eight years. They seem to grow, they are nice and green, but never blossoms. Will you please tell me why and what to do about it?*

MRS. G. G., Nashua, N. H.

Answer—Christmas cacti are not desert plants and will not bloom when grown in sand. In Brazil they grow in the treetops, where their nourishment is obtained from decaying leaves that lodge in the crotches of the trees. This suggests planting them in pots of loam and leadmold, with a little sand to let the water drain away. We use equal parts of loam, leafmold and sand. Evidently the water must not stand about the roots.

In your case we suggest removing some of the sand and working some loam and leafmold into the surface sand, and adding more on top.

If you wanted to take the trouble, it would be well to remove the plant, let some of the sand fall away and repot in same pot with as much loam and leafmold as you can put into the pot. This is not all. Keep the plants well watered all spring and summer until next October, when you will water less frequently, while the flower buds are setting, the flowers unfolding, and the plant resting from the effort of blooming. This means water the plant well but less often. Don't let it dry enough to shrivel. By April* water freely and never let it get dry again, for it makes its growth and generates its energy for blooming during the summer months. (*January in California)

CACTI -- MAPS -- WAR

A SHORT TRIP IN JAVA

By MOLITANE MEGATA, *Secretary*
The Cactus and Succulent Society of Japan

"To see a World in a grain of sand,
And a Heaven in a wild flower,
Hold Infinity in the palm of your Hand,
And Eternity in an hour."
—BLAKE.

MY DEAR EDITOR:

No one will deny that for even a Californian it is pleasant to have a trip in Porto Rico; nothing is more desirable for the students of succulents and orchids in Japan to try the travel of plant hunting to the South, in the Philippines, round Micronesia and throughout the Dutch East Indies. Luckily the writer had a short trip in Java and Celebes last summer and could have a chance to survey there a lot of cacti and other succulents already nationalized. It is very pleasurable and honorable to him to report to you some of the observations.

On the 31st of July, the writer left Kobe alone and arrived at Tandjon Pera, the Port of Surabaya on the 11th of August. During 18 days of the inland trip through Java, the writer visited Samarang, Bandoengan, Batavia, Buitenzorg, noted for the famous Botanical Garden, Tjibodas, Sukaboemi, Bandoen, Garot and Mt. Baramo. This Island of Java, owing to the extreme development of communication, is full of exotic plants which are mostly originated in the New World. How and when these plants were introduced to Java is a given problem. Unfortunately the writer has not so perfect knowledge to give a reliable information here for this solution; the writer only hopes Mr. van Woerden, the assistant curator in Buitenzorg Botanic Garden and the member of our Society, will kindly publish his precise answer for this problem.

The Islands of Indonesia and the Malay Archipelago, as well as the Island of the Empire of Japan, were born as the results of the horizontal pressure affected from the Asia Continent to the Pacific Ocean. Java is very mountainous and includes about 30 peaks over 2000 m.; the mountain climate, that is to say, the mild climate in the tropical zone, gives the most comfortable bed to the flowers and the most productive plantations to the inhabitants there.

The total area of Java is 48,504 square miles, and the population 41,718,464 in 1930. The 60% of the total area is the arable land, and harvested area extends 111% of the arable land, some crops being harvested twice a year. Most of main cities are very beautiful, and very comfortable to the life of foreigners.

There is no distinction among the four seasons in Java, one year being divided into two seasons: the humid half from October to April, and the dry half from May to September. Annual amounts of precipitation in Buitenzorg, Batavia and Surabaya are 4,215 mm., 1,796 mm. and 1,730 mm. respectively. The monsoon comes from the east and the consequence is that

FIG. 15. Map by M. Megata (Feb., 1941) showing locations of succulents in Java.

west Java may well be said to be the most pleasant land to live in comparing with the other parts of tropical Asia. In Java, there is no fire summer as in the Southern China, and no cold winter as in Calcutta; all plants ornamental and economic are most beautiful in bloom all over Java.

What kind of plants nationalized there?

DISTRIBUTION OF CACTI AND OTHER SUCCULENTS

(1) *Agave.* As ornamental plants, a lot of *Agave americana* are planted. The writer could not find the escaped type of this species. Both *Agave americana* var. *luteovariegata* and *A. angustifolia* are observed in Surabaya and Samarang, where it has relatively less precipitation. The specimens of this genus in Buitenzorg Botanic Garden are greatly modified by much precipitation, but they are splendidly beautiful in the Tjibodas Mountain Garden. The center of sisal hemp production has moved from Java to Sumatra, and culture of *Agave sisalana* is rather rare today in Java.

(2) *Furcraea.* In the west Java, species of *Furcraea,* another genus of Amaryllidaceae, are quite common as garden plants. The writer found a crop of escaped *F. gigantea* near Poentjiak Pass over 1,400 m. above sea level. As our auto, driven by Mr. Dakkus, the Curator of the Buitenzorg Botanic Garden, went so quickly, the writer could not examine the flower precisely.

(3) *Cereus jamacaru* and *C. peruvianus* and its *monstrosus* are quite common in east Java, especially in the city of Surabaya. In Buitenzorg so much of cacti are not cultivated, but most of them in Tjibodas. Only some species of *Selenicereus* could be found in Buitenzorg, and some 6 species of the genus are not rare in tropical Asia.

(4) *Opuntia ficus-indica, O. monacantha, O. nigricans* and a species related to *O. Engelmannii* are found, most of which are cultivated in east Java. But *O. Engelmannii* (?) is nationalized along the shore of the Madura Sea; and the writer found also many fine crops of this species in Probolingo and Passuruan. It may be recognized that one or two species of Opuntias were, whether in artificial way or not, introduced from the east through the Islands of Micronesia and Polynesia.

(5) *Bryophyllum crenatum, B. pinnatum* and *B. tubiflorum* are found in the Zoo of Surabaya. They are very tall, up to 2 m. and in full bloom in beginning of the dry season. It was my unexpected enjoyment to find the specimen which is identical to the description in Berger's monograph. *Kalanchoe laciniata* is also a popular garden plant in Surabaya.

(6) *Euphorbia.* No one could not forget the fine hedge of *Euphorbia neriifolia* and *pulcherrima.* In east Java most of the hedges and borders observed through the window of N. I. N. Railway were *E. neriifolia,* so much as in west Java, Poinsettia are very popular. *E. splendens* is not rare as pot plants as well as *Phyllocactus* and *Epiphyllum* in cities of Java.

(7) *Aloe.* Compared with the genus *Agave, Aloes* are not so abundant. In some gardens of ordinary domestic houses the writer observed only *Aloe eru* and another unknown species of the genus. This is very interesting, if we think of the characteristics of the vegetation in some districts on the Mediterranean Coast and the Dutch East Indies, where cacti and other succulents have been nationalized in the Old Continent.

In Java, as well as most districts of tropical Asia, the culture of cacti and other succulents is not so popular as in Orchids. But the fine collection of these plants in the Tjibodas Mountain Garden is very excellent, and at the same time the very skillful arts of culture under the condition of humid climate can be seen in this garden. There is no Society or Club of cacti in Java excepting a Society in Bandoen. There are no specialists in cacti, but all the powerful seedsmen there are very anxious to deal them and to publish also fine catalogues. The writer could find much more valuable plants beyond his expectations everywhere he visited. Though the name has 'of America,' our Society is today the Pan-Pacific Cactus and Succulent Society, and the present writer hopes heartily that majority of cactus lovers and growers in Java will join soon to our Society.

The writer wishes to express his sincerest thanks to Mr. P. M. W. Dakkus and other authorities for their helpful suggestions and kindest guiding in the course of this trip.

Kindest regards and the best wishes for the friendship over the Pacific.

M. MEGATA.

KODACHROME EXCHANGE

Horticulture Magazine (300 Massachusetts Ave., Boston, Mass.) has a Kodachrome Exchange listed monthly. Here is an opportunity to make exchanges with other plant enthusiasts. There is no charge for the listing.

Mrs. J. Frank Key enquires if there are any colored slides available for exchange, rent, or purchase. Any information will be forwarded to her.

Many of our members would like to exchange moving picture films. We will gladly publish what you have to exchange. Box 101, Pasadena.

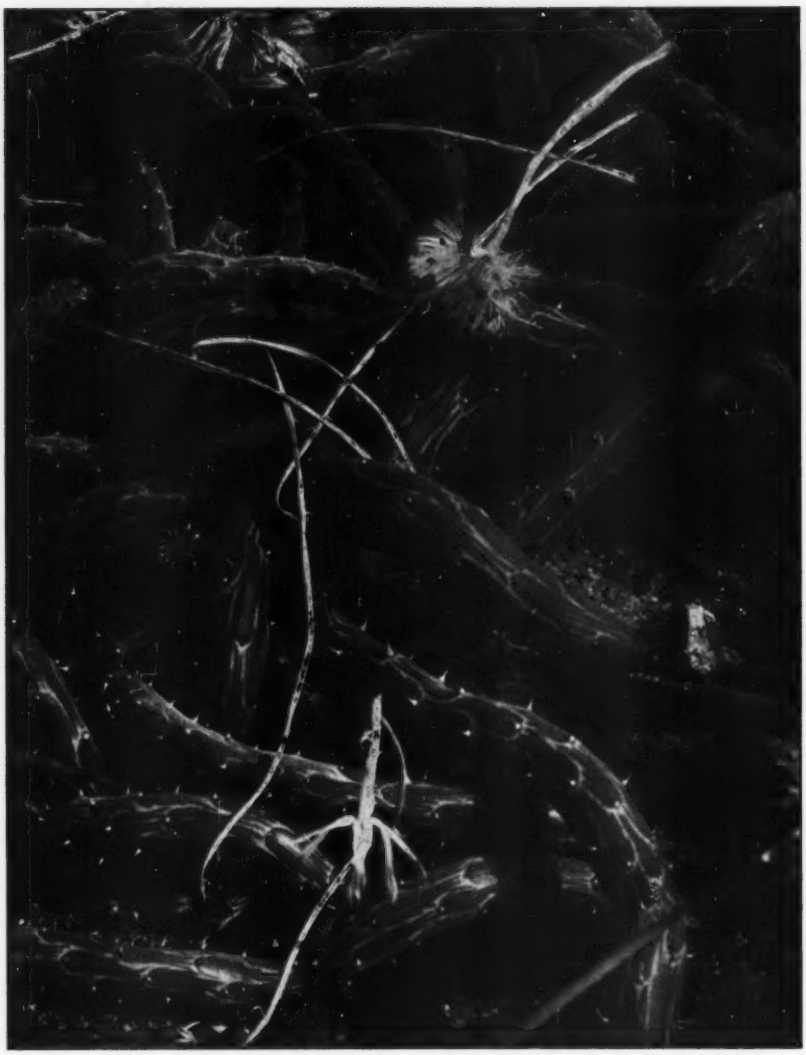


FIG. 16. A typical photograph of the Southwestern Cactus Growers exhibit. This photo of *Kleinia pendula* ("Inch-Worm") is by George Olin. Note the thistle-like seeds.

THIRD ANNUAL PHOTOGRAPHIC EXHIBIT

The Southwest Cactus Growers Third Annual Photographic Exhibit was held at the Southwest Museum, Highland Park, Calif., January 1st to 31st, 1942.

Sunday, January 11th and 25th, there was a special showing of colored slides taken by members of this group. The first was presented by Mr. George Olin and titled "Cacti and Their Home," the second was presented by Mr. Roy Miller and titled "Cactus Flowers."

The list of prize winners is as follows: Sweepstakes was won by Mrs. Eldene Olsen, Santa Monica, Calif., with a fine picture of a Ocotillo which also won first in the "Best Desert Scene" Division. Mr. Roy Miller of Los Angeles won a first in the "Best Botanical Print" Division with a fine picture of Euphorbia mammillaris. He also had winners in each of the following Divisions, "Best Individual Cactus," "Best Individual Succulent," "Best Cactus Flower," "Best Succulent Flower" and "Best Desert Scene." Mr. George Olin of Los Angeles had three firsts in the following three Divisions, "Best Individual Cactus," "Best Cactus Flower" and "Special Division." Mr. A. R. Leonard of Hillsdale, Michigan, had a first in the "Best Succulent Flower" Division with a fine picture of a Stapelia

bloom. Mr. Waldie Abercrombie, Jr., of Huntington Park, Calif., had winners in both the "Best Individual Cactus" and the "Best Cactus Flower" Division. Mr. H. O. Ohm of San Antonio, Texas, had a winner in the "Best Succulent Flower" Division. Dr. T. Grubb of Baltimore, Maryland, had two winners in the "Best Desert Scene" Division. Mr. E. S. Taylor of South Gate, Calif., had a first in the "Best Colored Pictures" Division. Mrs. Francis Runyon of Los Angeles, won first place in the "Best Pencil Drawing" Division and had a winner in the "Best Colored Drawing" Division. Miss Evelyn Nadeau of Highland Park, Calif., had two winners, one a first, in the "Best Colored Drawing" Division. Mrs. Lee Williams of Palm Springs, Calif., had a winner in the "Best Painting" Division.

This fine exhibit of plant and desert pictures was sponsored by the Southwest Cactus Growers, a study group, who meet the first Sunday of each month at various members' homes. Information regarding meetings may be had by writing the Secretary, Mrs. Mamie Abercrombie, 3813 Broadway, Huntington Park, Calif.

E. S. TAYLOR, *Publicity man, Pro-tem.*

MY FAVORITE SUCCULENT

My *Bryophyllum daigremontianum* flowers early in the year, beginning as a rule, late in January and continuing through March. The enclosed rather crude snapshot shows two of these plants (in February) at about the height of their flowering; as these first flowers go by, other buds (as well as plantlets) appear among them and soon produce a second and even a third flowering, lasting into April, on a small scale.

These plants, when indoors, are kept in a well lighted alcove portion of the dining room with full-length windows and southeast exposure. They are kept in a non-porous container, which rests on the floor,—both of which conditions reduce evaporation. I take no particular precaution about watering; in general, the soil is kept moist (not too wet), but it may dry out now and then for a day or two. An entire group of these plants and of *B. tubiflorum,* of all sizes, is kept together at present in one group in a metallic container of about 1 square foot and 6 inches deep, except in summer when the group of plants is lifted out and set into my cactus garden. There it remains from June to September, without any particular care other than some artificial shade during the first few days if the sun is especially hot.

FIG. 17

Conditions in the house are probably much too dry (referring now to humidity), as the new leaves are small, curled, and devoid of plantlets,—quite in contrast to their conditions in summer, out-of-doors. I am sorry I cannot give the exact age of the plants shown in the snapshot; contrary to my usual practice, I neglected to record their acquisition. I am quite sure, however, that these plants were either 2½ or 3½ years old at the time of the snapshot.

FRANK N. HOUGHTON, Mass.

EDITOR'S NOTE: If members will send in photos of their favorite cactus or succulent we will publish this as a series—a Cactus and Succulent in each issue with the reasons why each plant is a favorite. Send yours in now. Prof. Blocher votes for *Hamatocactus setispinus* —see next issue.

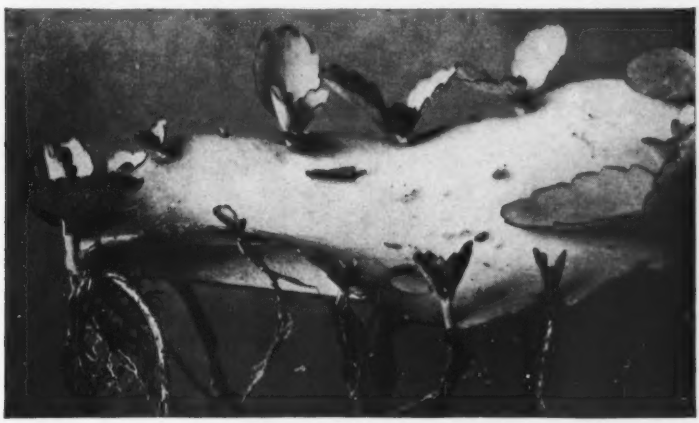


FIG. 18. The Air-Plant, or Bryophyllum, is propagated by laying a leaf flat on moist sand with part of the stem also set in the sand. Little plants form at the leaf notches. The illustration is from "Propagation and Improvement of Horticultural Plants," by W. P. Duruz, Oregon State College. (*Bryophyllum pinnatum* [Mexican Love Plant] has a romantic association).

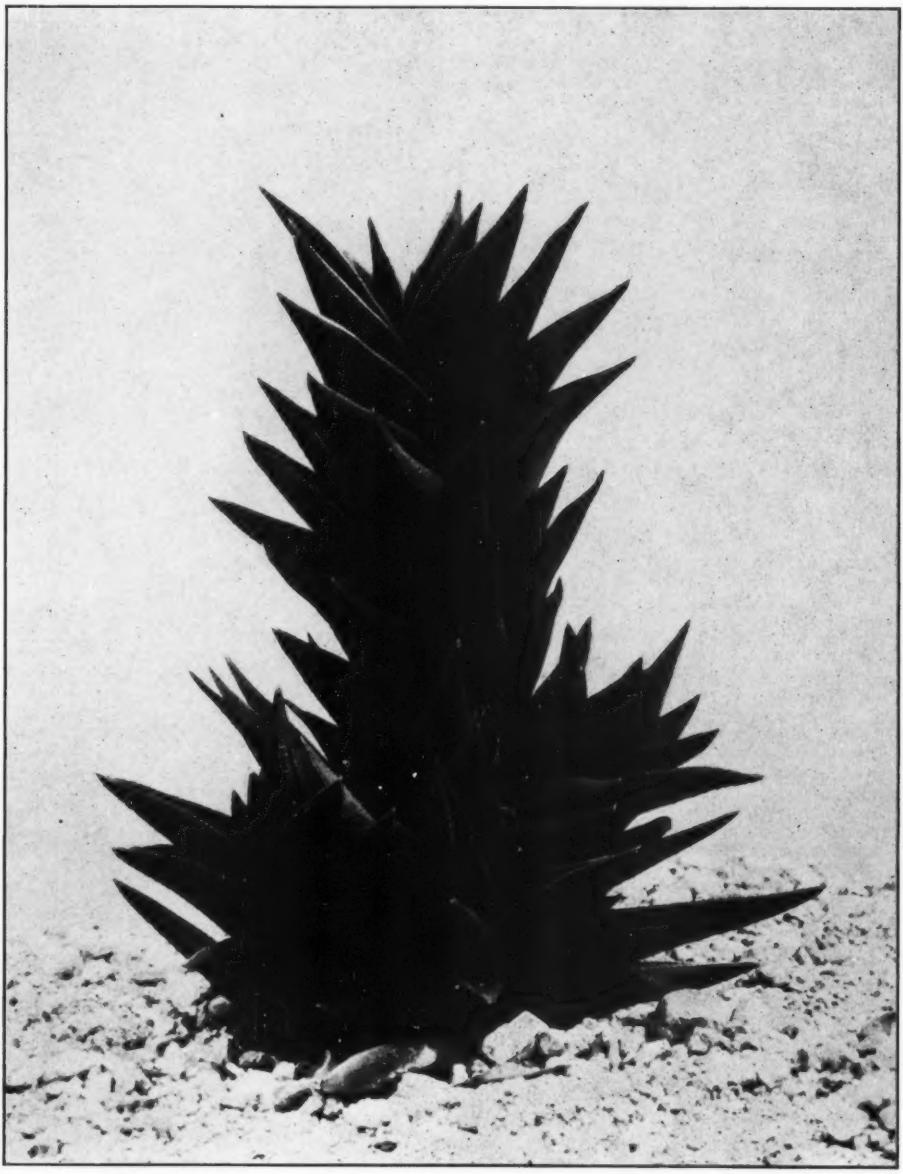


FIG. 19. *Haworthia tortuosa* Haw. nat. size.

Notes on Haworthias

By J. R. BROWN

Haworthia tortuosa Haw. Syn. (1812) 90; Bak. in Journ. Linn. Soc. XVIII (1880) 201; Berger in Pflanzenr. IV. 38. (1908) 79; Poelln. in Repert. Sp. Nov. XLIV (1938) 207. *Aloe tortuosa* Salm-Dyck, Monogr. (1836-49) sect. IV fig. 2.

Plant with erect leafy stems 10-13 cm. tall, proliferous from or near the base and forming a dense cluster. Leaves in 3 spiral rows, crowded, erect-spreading, ovate lanceolate, acuminate, 3-5 cm. long, 18-20 mm. wide, very dark green, face smooth, concave, back rounded and roughened with crowded minute tubercles of the same color and with a short oblique keel towards the somewhat pungent tip, the margins and keel crenulately roughened with small tubercles.

Peduncle simple or rarely branched, slender; bracts deltoid and about the same length as the 3-4 mm. long pedicels; perianth about 15-18 mm. long, the tube white with greenish lines, segments linear, obtuse, revolute, white with reddish lines, the lower more recurved with involute margins, the upper more erect.

Locality: Unknown.

Introduced to England by Masson about 1797.

Haworthia tortuosa is one of the long known Haworthias which has never been rediscovered in So. Africa and there is a possibility that it may have been entirely destroyed by the grazing of stock, as may be the case with other similar plants.

The plant of *Haworthia tortuosa* (sect. *Tortuosae* Bak.) shown in the photo was growing outdoors and was of a uniform, very dark green color. Where grown exposed to much strong sunlight the color becomes somewhat brown and the tiny tubercles become aggregated into irregular, more or less transverse ridges on the back of the leaves, but when grown under glass the minute tubercles are spread evenly over the leaf surface.

MY PLANTS GROW

At the Convention last summer a Californian said to a couple of us Iowans, "Your cacti are skinny in this part of the country." We resented that a bit. He just hadn't seen *ours*. Hence this little article.

Two years or more ago I started a card file of my cacti and other succulents. This way I can tell how my plants are performing. Advances in growth, bloom, and other items of interest, are entered from time to time. This was done at the sugggestion of "Cacti for the Amateur." What wouldn't I have given to have had that book two years before I started my collection!

Of course we in the Middle West have to adapt any advice to our needs. We have long winters, often early falls and late springs. I've seen light frost around September 10, and as late as May 14. Last year on that date the thermometer registered 33 degrees. All my plants were out, and none suffered, as they were in places protected from the wind. Usually I start putting my plants out about May 1, and have to cover occasionally after that. Thus they get the refreshing spring rains and start to grow right away. Most of my plants are set in pots in the ground, leaving about 1 inch above the surface so that dirt won't wash into them. Also I set them in a place that has a natural slope. If it doesn't rain for several days in hot weather, they get a good watering in the evening, and on very hot days every evening, slowing up on this as weather gets cooler. And this means *watering*, too, not just sprinkling. Cacti can stand a great deal of water during their growing season, in fact they seem to thoroughly enjoy it. I cannot emphasize this too much, as I talk to many people who are afraid of watering cacti. However, I rarely use pots without good drainage. I have a few which are carefully emptied after each rain.

I bought leafmold a couple of times, but finally two falls ago started a compost pile under a cherry tree in the back yard. We have several very large maple trees on the lot, and twice now I have gathered their leaves in the fall, also miscellaneous garden cuttings of all sorts, and have stacked them thinly so that rain could get to them easily. This year I've had a real pit dug back of the garage, and it is now getting its stacks of cuttings of all sorts. It is wide and not too deep. This year I have had plenty of leafmold to use after exhausting some I bought early in the spring, and there'll be enough to make plenty of compost for winter use. Some might say, "Why don't you go and get some from the timber?" The answer to that is that there is so much oak in our timber that the leafmold, while fine is quite acid, and can only be used on a few plants. Our soil here is naturally rich, so to it I add one part leafmold, and one part coarse sand to two parts loam. Also for cacti I keep some old mortar on hand, and plenty of lump charcoal, which I prefer to the fine stuff used for chickens. I can pound it any size I want and usually use a few chunks in the bottom of a container with other drainage material, besides a little in the soil itself. The latter especially with small seedlings.

Also in spring or early summer I incorporate some all 'round fertilizer with the soil. I use Vigoro, which must be used with care. Others use other kinds, but some is necessary if growth and bloom are wanted in plants.

Also for the past two summers I have given my potted plants three waterings of liquid fertilizer, one rounding teaspoon of Vigoro to two quarts of water. This is added rather sparingly, however, about half what one would give for a regular watering. When it has soaked in I have followed the application with a small amount of plain water, so that it has a chance to get into the soil immediately. Next year I expect to use about two more applications, especially on some plants that I feel sure can take it.

With other succulents, different methods apply. I repotted my *Euphorbia splendens* this spring using ¼ cow manure, also used this with some other succulents. They thrived on it. Some succulents, however, will thrive in a heavy soil. Echeverias, sedums, crassulas, seem to do well with this treatment, especially out of doors. In the house, the soil should always be looser.

It is a mistake to suppose that all cacti should have full sun. This is far from the case. Plants should be studied individually for this. For instance, Lobivias do well with quite a bit of shade. When I have one that is going to bloom I move it into dense shade so that the bloom will last all day. If it gets full morning sun here the bloom will be gone long before noon. Incidentally I was delighted when I discovered that my little *Lobivia Binghamiana* started to open in the evening, and stamens were showing at 10:30 P. M.

I've specialized in globular plants on account of lack of room for larger ones. I now have about one hundred species of Mammillarias, and many other plants of this general type. However, recently I've added some tall growers, which certainly add to any collection. The champion bloomer for the year is *Mammillaria Kunzeana*, now 2½ inches, and has been in my possession two years. On March 1, it was encircled by ten tiny blossoms, kept on blooming though not always at that

rate until late in June. Then it rested about five weeks, starting again about August 1. It is still blooming, and has buds, on this date October 9. Last summer it only had a few blooms. Another extra fine bloomer is *Hamatocactus setispinus*. This plant 3x4½ inches in the fall of 1940, had only ten blooms during the summer. This year it now measures 3½x5½ inches, and has never been without buds or blooms since the middle of June, the last two came on October 1. At this date, my plants are all in the house, and the following plants are still blooming: *Mammillaria camptotricha, durispina, camptotricha* var. *decipiens, Astrophytum myriostigma* var. *potosina* and *Thelocactus phymatothele* are in bud.

While my main pleasure is in cacti, and in my private collection they outnumber other succulents two to one, I believe that it is a mistake not to have some succulents. Many of them grow much faster than cacti, and bloom is not so difficult. *Euphorbia splendens* is a champion bloomer, but sulks both when I bring it in doors, and when I take it out in spring. However, it soon gets over this. It requires heavy feeding, however, to produce good bloom. Other good bloomers are Stapelias, Huernias, some Echeverias, Crassulas, Kalanchoes, Bryophyllums. Faucarias and other Mesembs. are also good bloomers, but seem difficult for many on account of the lack of care in watering.

I've talked mostly of blooming plants, because that is what most people want in their collections, and have not said much about other growth, though this was my original theme. Some plants grow very slowly. One must be sure that some progress is made, however, or know the reason why. One of my first cacti in 1937 was a tiny one inch "pincushion," it was labelled. I've never been able to find out the species, either. It now measures 4¾x3½ inches, and is full of offsets, about twenty. It only started this during the third summer. For some reason it has never bloomed, but many plants do not in cultivation, and many wait years before doing so. A specimen plant of *Astrophytum ornatum* a year ago was almost 5x5 inches. It only added ¼ inch to the diameter, but is now 6 inches high, and a beauty. *Cleistocactus Baumannii* was 9½ inches a year ago, with a tiny new shoot showing at base. The original shoot is now 16 inches, and second shoot 9 inches. Details are not too interesting and I think I have said enough about this.

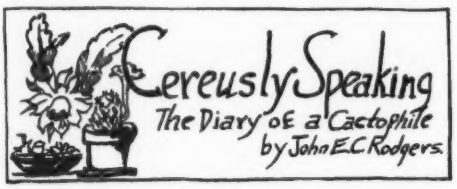
I should have said that other cacti that have grown and bloomed for me are of the genera *Notocactus, Gymnocalycium, Thelocactus, Rebutia, Echinopsis, Chamaecereus, Epithelantha, Strombocactus, Echinocereus, Astrophytum, Obregonia, Coryphantha.* I'm sure there are many other types that can be made to bloom, even lure, with proper treatment. And I have made no mention at all of Haworthias, which I am also collecting, as my chief succulent, and which are very interesting to propagate. The blooms, however, are not exciting.

Winter care in our part of the country is most important. Most cacti and other succulents also winter better in as cool a location as can be found, without too great cold. Very little water is given cacti, though many of the succulents seem to require more. Complete rest for cacti in winter also helps blooming in summer, as I've found out by experience.

May I say also that I've visited quite a few collections, both in this immediate vicinity and in Des Moines. I've noted that the more the owners study their plants, the better results they obtain. So many people are afraid of water for example, others of direct sunlight, or fertilizer or withholding water in winter. Some collections in Des Moines are very fine among members of the Des Moines Cactus and Succulent Society, where they have been studying and exchanging experiences for several years. The Des Moines City Greenhouse project, the work of the Des Moines Society, and now in its second year, is well worth the visit of even some Californians who think we raise "skinny cacti."

And may I suggest that some dealers could help a lot with a little more information to greenhouses that purchase their plants for resale. I've heard some wild stories in the past year or two about things told by greenhouse owners. It is no wonder that the innocent beginner has "skinny cacti," if he listens to them. Sometimes it is a wonder he has any at all. May I say that if all of the dealers were like some of them, and people paid attention to the directions they got, they needn't fail to have fine collections. Also some readers of the JOURNAL could read it a bit more carefully.

ELINOR T. SUTTON.



A monthly diary by JOHN E. RODGERS, Lorain, Ohio

Have you ever kept a record of your hobby, fellow hobbyists?. I started one in January, 1934. The plants I write about are old friends. A few have passed on, but their children remain as seedlings or cuttings to console me.

Part I. How Did It Begin?

In 1923 and 1924 when I was a student at Oberlin College, I roomed at Fowlers, a comfortable old-fashioned type of home, where there was a large hall with a southern exposure. Here a 50-year-old Christmas Cactus from the Wisconsin home of the family, rested from late August to the Christmas holidays when it was moved full of buds and blossoms, to the dining room. An *Epiphyllum Ackermannii* was set out on a stump in the yard under a huge elm in the late spring after a winter's rest in a cool, dimly lighted basement. By early June, it was a mass of large red flowers which invariably attracted notice.

In September, 1928, I renewed old acquaintances. Miss Kate Fowler gave me cuttings of both plants just as she had others, through the years. "Another of our boys," she said, "has a living item for his memory book."

All through 1929 these cuttings grew and flourished on an east window sill. Little did I realize that the virus of Cactusitis was even then in my veins.

In July, 1930, a local florist advertised his complete stock of plants for sale. He showed me a small collection of southwestern cacti which he had planted in flat Japanese bowls. I still remember that sudden clutch at my heart and the thrill of possession when I added ten of these plants to my two. They now occupied a west window seat. How they enjoyed the hot afternoon sun and what a picture they made.

By 1931 the collection numbered 55 plants and I kept them on a kitchen table in front of a west window in another house. *Thelocactus bicolor* and *Hamatocactus setispinus* had entered my life. A satiny pink and a yellow with vermillion centered flower had brought to me the second phase of a collector. My spiny brutes had bloomed. That was the year I learned that cactus cuttings did not wilt if not immediately planted; rather, one left them to callous before plant-

ing in sand. (I forgot some on a high shelf and roots started from the callous.)

In March, 1932, Sandy (Mrs. Rodgers) and myself attended the National Flower Show at Cleveland, Ohio. Past the formal and showy plantings of spring flowers, tucked away in the basement of the exhibition hall along with cultivators and plant foods, we found a huge bed of pure white sand planted with beautiful cactus plants.

I was amazed at the varied forms of Mrs. Pattison's collection. She was the usual sales person until I told her timidly that I was a collector. Ah! Magic word. And still is. She took me to the salesroom. Here I bought 20 or more unusual cacti, several cuttings, and a package of mixed seed, suitable for a beginner, with her directions for planting. I couldn't go wrong, or so I thought. The seed did come up but there were so many things I didn't know that I ended with only one, an *Acanthocereus pentagonus* which to my dazzled eyes, equaled the fabulous Jack's Bean Stalk for growth.

At the Cleveland Garden Center, we heard of Eugene Ziegler at Spencerport, New York, the only collector known to them. So off we started. For 270 miles of cleared roads, with drifts of snow on either side more than car high, we traveled all night. Cactus did the trick, and we were welcomed into that select fraternity of cactophiles which to this day amazes us with its wholehearted interest and bounty. Yes, bounty of plants and time, too, whether he be doctor, lawyer, laborer, or housewife. We found Gene and Violet Ziegler and their young daughter, Sue, full of enthusiasm about cacti. Our families were soon fast friends. Eugene had the rarest plants I had ever seen. We spent hours going around and around his greenhouse, each time seeing something different. We have made return trips to the Zieglers at least once or twice each year and they have been to Lorain.

We have gone 600 miles to see a new collection, to make new friends, and renew acquaintances with cacti as a bond. The same bond opens the door at our house to those who find the plants interesting. Ziegler gave me names of several collectors nearer home who had bought plants and seed from him.

From 1932-34 I went on alone with my interest. I was dubbed queer and slightly balmy by our neighbors and friends.

In 1933 I built a small greenhouse, 6 feet square, using hotbed sash and heated by an outlet from a hot air furnace that heated the house. Into this went 200 plants, mostly cacti. Other succulents had not captivated my interest then.

In May, 1934, a local feature writer decided my hobby was unique enough to warrant a story. It was, and she sold it to the Cleveland Plain Dealer with a pen and ink sketch I had made of my *Echinopsis multiplex* in flower. It made a full page in the Sunday magazine section. I received "fan" letters from equally alone cactophiles. *I WAS NOT ALONE.* At least 15 others, not too far away, were interested. One good woman suggested I trade her some plants for some crocheted lace.

In January, 1934, I began my diary noting the weather conditions, the length of day, the hours of sunshine, and the happenings among the plants and plant collectors I continued to meet. From these observations and notes over a period of 7 years, I hope to carry on a monthly column which I choose to call "Cereusly Speaking."

Part II. JANUARY IN OHIO

January 1, 1942, and 3 o'clock in the morning. I look at my plants for the first time this year and think how lucky they are to all be housed in my nice shiny, new Lord and Burnham lean-to. Friends more mechanically inclined found me good help in building this 9x15 home for my spiny brutes. Bill Whyte and Charles Amato, I salute you this New Year's morning. Last year my darlings were in an unused corner of a tomato house in Elyria, 10 miles away from me. That was while we were in the throes of real estate deals prior to changing our residence. I had dragged all 1650 plants from their close quarters in lean-to No. 2, size 6x9, and the reconstructed coal bin where the plants had wintered for the past five years. Then from the tomato house they went to outdoor beds in late June. In early November, I crowded them into the chicken coop with a little oil stove and they managed not to freeze before I placed them here in early December. Despite hardships, the old faithful Christmas Cactus is still blooming and any number of buds are showing on other plants. I checked the small hard coal heater (which isn't supposed to let the temperature drop below 45 degrees at zero temperature), and got me off to bed. Outside thermometer reads 52°. Promised a few plants a good spraying with Shep's solution after lunch.

January 2. Yesterday's "torrid" temperature has been somewhat altered by a 48 mile gale from the west. Down to 21 degrees and lower is threatened. Shep's did its work. Even through a glass, I see no thrip. Scale is encased in an oily film, its tomb, I hope. I'll repeat the dose in a few days and that should do the trick.

January 3. Last year this time I was preparing my plants for the annual exhibit at the Garden Center in Cleveland. Any number of them I had had 10 years, according to the record I keep in the Houghton conspectus. *Astrophytum ornatum* which I exhibited was 6 inches high and 5 inches in diameter. It was a little purplish, inch-high plant when I bought it for 50 cents from Mr. Woo in a Cleveland Department store in 1932. Got my December JOURNAL this week. What a nice issue. And how grand to get it after the holiday rush when I can have time to read it as I like.

January 8. I have not yet installed my artificial lighting system for use these short dark days. I began to use artificial light 6 years ago today. I had received a booklet "Growth of Plants By the Use of Artificial Light" put out by Nela Park in Cleveland. Cacti were barely mentioned possibilities. But the idea persisted and I began turning winter darkness into daylight by using a 100 watt lamp 2 hours before sunrise and 4 hours after sunset each day. I later learned that the book was right when it said that low wattages were as effective. I then strung up two 40 watt bulbs with bell-shaped shades about 30 inches above my plants in the 6x9 glasshouse. Buds that used to drop in late spring, then bloomed for me. Columnar type growth was not as strictured, either, I found. Louis Wahrer (President of the Midwest Society) and I want to try fluorescent lighting. I will observe his efforts this year until I get around to doing it myself. We have to do something when you consider that we average only 120 days of sunshine per year in the Cleveland area. It was 3 degrees below zero today and the stove works fine. Lowest temperature in greenhouse was 48 degrees. Who should know better than I? I got up three times during the night to see.

January 11. Today my song is the same as in 1934. What can I do to make my fine specimen of *Chamaecereus* (peanut cactus) bloom? I starved it in 1935;

dried it out in 1936; put it next to the glass in 1937; cursed it in 1938; almost threw it out in 1941. But I have seen E. J. Fish, in near-by Strongsville get his to bloom. I will too—so help me. Surprise! Louis and Ann Wahrer of Bedford are here today to see the new greenhouse. Louis seemed to think my succulents looked good. High praise from Mr. President. *Rhipsalis cereuscula, Bryophyllum tubiflorum, Lepismium cruciforme,* and several Euphorbiae were in bloom. More buds showing color.

January 13. New book by Marshall and Bock came today. Pictures are irresistible. It is a masterpiece of publishing, editing and context. I ignored lunch, rushed dinner, and have refused to go to bed so that I can enjoy it a bit longer. I already accept it as a worthy supplement to Britton and Rose. A veritable Vol. V.

January 15. Received an *Epiphyllum* picture postal from Mexico City. Must be my friends remember I collect cactus postals. Wish I could keep my Epiphyllums from too much stem loss due to shriveling. Take up too much room on my benches, so I put them underneath where it is cool. They bloom for me but not according to California standards. Not profuse enough.

January 18. Stopped at Garden Center en route to Machwarts' for Midwest Society meeting today. Am to speak over WTAM, Cleveland, 9:45 a. m., February 21, they tell me. Subject will be "Succulent Facts." Sandy has charge of this year's exhibit, February 1-28, which will stress succulents. Shetrone will come up from Columbus on the 15th to tell us about some lesser known ones. Jim Carment is going to show 150 kodachrome slides which he has taken of cactus blooms in our local collections this last year. Dr. Machwart discussed pests and their control today. His fine collection shows none of the ravages of disease. However, he had on display a fine example of what he calls root nematodes. Haselton refers to them, I believe, as "round gobules" on the roots. "Doc" is experimenting on cure for the disease. I haven't found it in my plants —YET. When I get a new plant I quarantine it for a month or 6 weeks and cyanogas it before putting it in the greenhouse.

January 20. The miracles I hoped for with the B-1 which I ordered this day in 1940 have not occurred according to my diary. My strawberry cactus did not produce strawberries . . . just little red hickies. Another Burbank washed up.

January 22-30. Spring-like weather again, with highs in the 50s and the lowest temperature 26. The deficiency in temperature was 124 on January 16, but now on January 31, we have an excess of 13 degrees. Paper says that farmers in the limestone belt southwest of us are hauling water. Perhaps *Opuntia compressa* didn't go far wrong in choosing this district for its Ohio habitat. Several of my 13 varieties of *Rhipsalis* have been gay with pink, yellow and white blossoms. I have good luck growing and flowering them. I hang them from the glass bars with tin cans fitted over the bottoms of the pots. The cans catch the water and add moisture when I neglect them. At this time *R. grandiflora* is my favorite for bloom and *R. rhombea* for form. *Euphorbias mammillaris* minor, *fulgens, meloformis, grandicornis,* and *obesa* have bloomed. Interesting, if not pretty. Dried up now, silent reminders of enforced virtue in my Adamless Eden. *Hariota salicornioides* just got under the wire. Three long narrow orange buds opened January 30. Opened on February 16, in 1936, but since has been gay with bloom by January 10, each year. Much moving evidently has made it late again. I was hoping *Schlumbergera gaertneri* would beat its earliest blooming date for me of Feburay 26, 1938. Buds are only ¾ inch long. Received the original two-joint cutting from Mrs. Vatty of Chagrin Falls in 1936, in a letter asking me to identify it for her. I remember with what fear and trembling I planted it as I could get no grafting material at the time. I was told the plant would not do well on its own roots. But it has flourished for five years and it is crimson for two weeks or more each blooming period. At present it has 3 main branches, and 4 minor with over a hundred buds. Some stems have four buds at the tips.

As January closes, my "Line a Day Diary" looks like this:

January 31, 1934. Went to local greenhouse to see cactus shipment from Texas. I would like to have lots of *Hamatocactus setispinus* to liven up my collection.

1935. Friends gave me several pairs of tropical fish. Told me I would forget cactus.

1936. Frost on the glass so thick I can scrape it off with my finger nail. Have protected my seedlings with fine gravel to prevent damping off.

1937. Another spring day. Tulips up along the south side of the house. *Euphorbia splendens* a mass of red flowers. Excess temperature to date 270 degrees.

1938. Wilcoxia Poselgeri starting to grow. Cold and disagreeable today. No tulips up this year.

1939. Rained all night. Radio reports 6 to 8 foot drifts of snow in Indiana. Chicago snowed in. Warmer weather predicted for Cleveland area.

1940. Rhipsalis cereuscula has bud started. *Stapelia grandiflora* on shelf near glass has buds. Watered all my plants in the basement. Several Epiphyllums have begun to shrivel.

1941. Gave all my plants that have spine bugs, mealy bug, or aphis a shot of Shep's. Effective and easy to mix.

1942. Rain with 54 degrees at 2 p. m. Young grasshoppers hatching in Stapelia pots. Evidently mama grasshopper found my soil mixture not too hard for her ovipositor. Packed 35 plants for Society's exhibit at Garden Center. *Echeveria pulvinata* is just coming into bloom. *Pedilanthus variegata* makes a pretty picture in a tall flower pot-shaped dull green vase. *Gasteria acinacifolia* will fit into the window setting perfectly. Waxed all of my pots as suggested in JOURNAL (thanks to Graham Heid).

To be continued each month

EDITOR'S NOTE: Surely, this column will encourage discussion. Write us now.

CORRESPONDENCE INVITED
Lois McMillan,
Box 92,
Palmetto, Ga.

SHARE YOUR GARDEN

Miss Holding, in "The Flower Grower" says, "I feel keenly that this spring, as never before in our nation's history, garden owners should share their gardens, and in so doing contribute their part towards drawing our nation into a closer bond of unity, to fight those forces which would take from us our American way of life."

This Share-Your-Garden movement is recommended now as a vital project for garden clubs, service clubs, fraternal and religious agencies, other groups and individuals as a part of the National Defense program.

The following names should be added to your list of cactus gardens with an open gate:

John Haag, 1117 Stryker Ave., St. Paul, Minn.
Mrs. Harry Lewis, 2034 E. 110 St., Seattle, Wash.

BOOK REVIEW

WHAT KINDA CACTUS IZZAT? by Reg Manning. *J. J. Augustin.*

A new and different—startlingly different—approach to an old subject is Reg Manning's new cartoon book, "What Kinda Cactus Izzat?" Written to answer the type of questions continually being asked Arizonians by tourists, a book of this sort doesn't need to pretend to be scientific, yet a great deal of scientific information has been served up by Mr. Manning in the acceptable form of amusing cartoons, which are held together with a light running account of the desert plants one encounters in the southwestern "cactus belt."

Reg Manning has for years had a mild interest in cacti, as has every public spirited Arizonian. As cartoonist for a Phoenix paper, he so ably and interestingly interpreted the news events through his drawings that they are syndicated and now appear throughout several states, often finding their way into national magazines. Mr. Manning drew up a cartoon guidebook of Arizona, then of California, Boulder Dam, and now finally this one of desert plants. With his knowledge of the desert, and of the type of cartoons the public enjoys, it is small wonder that he has turned out a book which as often as not is sold out in the Phoenix stores.

The cartoons ramble with one through the Opuntias most often seen in Arizona, then for several pages graphically give the many interesting features of the Saguaro. Slow growth, skeletal structure, root system, method of expansion for rapid intake of water, the zoological inhabitants of "cactus caves" such as the Gila woodpecker, and the uses of the saguaro fruit and ribs to the Indians are all illustrated with drawings and explained in the text. Illustrated and explained in such a way that they will be remembered! The book breezes on through the other members of the Cereus tribe as represented in Arizona, including *Lemaireocereus thurberi, Lophocereus schottii, Peniocereus greggi,* the Ferocacti, *Echinocerei,* etc. One of the most instructive chapters is that pointing out which of the desert plants are not Cacti, and interesting things about them. Included in this category are the yuccas (with the life cycle of their necessary little ally the pronuba moth), Dasylirions, Agaves, Nolinas, Ocotillos, and several of the other desert trees and shrubs.

If you are looking for a book with which to key out a Mexican *Coryphantha* or Bolivian *Lobivia,* get something else. Even a few of the facts given might be questioned, such as the saguaro's being the largest cactus in the world. Reg Manning admitted to me that he knew there *were* larger ones, but of course it would be dangerous for an Arizonian to print such a heretical fact! However, if you want something different with which to enliven the deep and serious studies on your cactus library shelf—a book with which you can sit down with pleasure, knowing you will get a great many chuckles and several hearty belly-laughs from perusing, don't miss "What Kinda Cactus Izzat?"

GEORGE LINDSAY.

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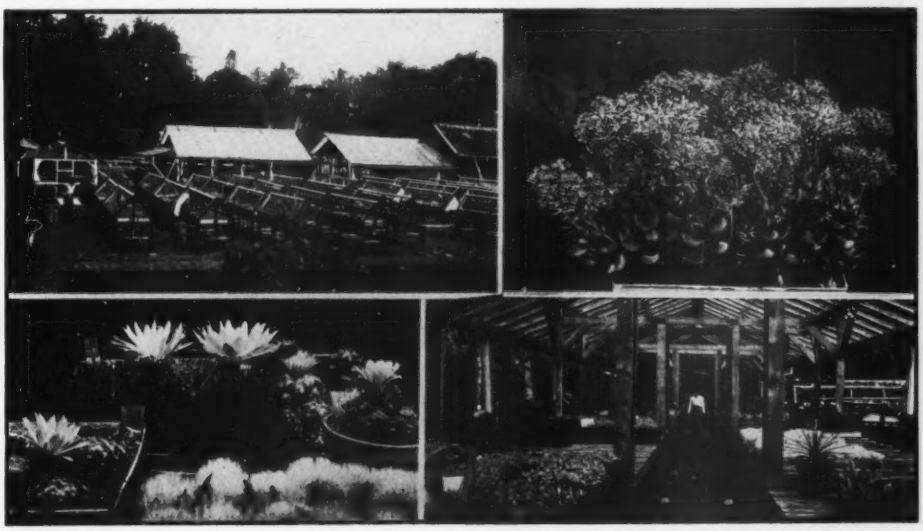

FIG. 20

TOP LEFT: Main view of Cactus farm "Batoetoelis," Java, where the plants are grown in open frames in full sun; at 1 o'clock they are covered with glass for protection from the daily afternoon rains. RIGHT: *Kalanchoe globulifera* var. *coccinea.* BOTTOM LEFT: *Echinocactus longihamatus, Ariocarpus fissuratus, Mammillaria longimamma* var. *melaleuca,* and *Mammillaria bocasana,* all in flower. RIGHT: Glass houses are used to protect seedlings from the rains.

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